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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,459	10/03/2003	Kenneth Paul Zarnoch	132177-1	3434
23413	7590	08/17/2005	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			BUTTNER, DAVID J	
			ART UNIT	PAPER NUMBER

1712

DATE MAILED: 08/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/678,459

Applicant(s)

ZARNOCH ET AL.

Examiner

David Buttner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 14-17 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 18-25, 27-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Claims 1-13,21,27-31,34,37 and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii '786.

Ishii produces methacrylated PPE oligomers (see examples). Unsaturated compounds and initiators can be added (col 6 line 11-14). Fused silica and polymerization inhibitors (col 8 line 12-14) can also be included.

Ishii does not specify amounts of the initiator and inhibitor, but the claimed amounts appear to be conventional. It would have been within the ordinary skill of the art to identify appropriate levels of initiator/inhibitor through routine experimentation.

Claims 1-13,21-25,27-31,34,37 and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii '786 in view of Kagaya '605.

Ishii does not specify inhibitor and initiator levels in his composition.

Kagaya teaches butylcatechol inhibitors at 0.0001-0.1pph (col 6 line 40) and initiators at 0.1-4pph (col 6 line 31) for similar compositions of acrylated oligomer + unsaturated monomer.

It would have been obvious to utilize inhibitor and initiator in the conventional amounts in the Ishii composition for the expected results.

Claims 1-13,18-23,27-31,34,37 and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Yeager '782 or Zarnoch 2002/0173597 in view of Ishii '786.

Yeager and Zarnoch both exemplify blends methacrylate capped PPE, unsaturated monomer and peroxide in applicant's amounts. These references lack a suggestion of inhibitors although additives in general are suggested (Yeager col 15 line 4-12; Zarnoch paragraph 64).

Ishii (col 8 line 12-14) suggests inhibitors can be added to methacrylate capped PPO compositions. Inhibitors would be expected to increase storability and lengthen cure time. It would have been obvious to include an inhibitor in the Yeager/Zarnoch compositions for these advantages.

Claims 1-13, 18-25 and 27-40 rejected under 35 U.S.C. 103(a) as being unpatentable over Yeager '782 or Zarnoch 2002/0173597 in view of Harada '980 optionally in further view of Kagaya '605.

Yeager and Zarnoch both exemplify blends methacrylate capped PPE, unsaturated monomer and peroxide in applicant's amounts. These references suggest antioxidants, but not any specific species thereof (Yeager col 15 line 10; Zarnoch paragraph 64).

Harada teaches butylcatechol functions as a polymerization inhibitor and an antioxidant (col 1 line 7-11). It would have been obvious to include butylcatechol in the Yeager/Zarnoch compositions for either of these purposes. Further, Kagaya teaches typical amounts of butylcatechol when present as an inhibitor.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-13, 18-25 and 27-40 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-51 of copending Application No. 10-678243. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application also claims methacrylate capped PPE (claim 42), unsaturated monomer and inhibitor (claim 39). There is significant overlap between the applications.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-13, 18-25 and 27-40 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-51 of copending Application No. 10-920744. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application also claims methacrylate capped PPE (claim 5), unsaturated monomer and inhibitor (claim 26). There is significant overlap between the applications.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant's arguments filed 6/22/05 have been fully considered but they are not persuasive.

Applicant argues that there is no documentation of record supporting the assertion that the claimed amounts of initiator and inhibitor are conventional.

This is not convincing. The Yeager reference exemplifies 2-3 parts of peroxide initiator in his examples of methacrylate terminated PPE + unsaturated monomer + initiator (tables 1-2). Kagaya (col 6 line 40) teaches 0.0001 to 0.1 of inhibitor as well as 0.3 to 3 parts of peroxide initiator (col 6 line 31). Of course Kagaya's composition is not identical to applicant's claims or would have been applied as anticipatory. However, Kagaya's composition is based on methacrylate terminated polyester + unsaturated monomer. These amounts would apply to the Ishii and Yeager's systems because the reaction scheme is similar.

If one were to employ 3 parts of initiator (as most of Yeager's examples do), 0.06 to 0.1 parts of inhibitor would result in applicant's initiator/inhibitor ratio. This is nearly half of Kagaya's suggested inhibitor range. In view of the fact that applicant wants to "inhibit" the cure to allow for longer processability, one would select enough inhibitor to counteract the free radicals steadily being produced from the peroxide initiator. This does not appear to involve anything more than routine experimentation.

The Encyclopedia of Polymer Science can be cited to illustrate how phenols intercept free radicals.

Interestingly, commonly owned Zarnoch 2002/0173597 clearly states the appropriate amount of curing catalyst (ie initiator) and additives such as antioxidant can be determined without undue experimentation (paragraph 63,64). It appears applicant's arguments are at odds with their own previous publication's statements regarding the ability of those skilled in the art to select appropriate amounts of initiator and other additives.

Applicant argues the inhibitor unexpectedly permits increased flow during early the early stage of cure without sacrificing the overall curing time.

This is not agreed with. Applicant's table 1 shows an increase in overall cure time when including the inhibitor compared to without the inhibitor (compare time to unity for C1 vs 1,2). Applicant's data shows the expected temporary delay in cure expected from sacrificial inhibitor/antioxidant phenols.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is 571-272-1084. The examiner can normally be reached on weekdays from 10 to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on 571-272-1302. The fax phone

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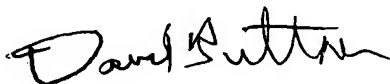
number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Buttner

DAVID J. BUTTNER  
PRIMARY EXAMINER

8/15/05

A handwritten signature in black ink, appearing to read "David Buttner", written in a cursive style.